



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.

Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411

Fax: 064-30321

Website: www.mucst.ac.ke Email: info@mucst.ac.ke

University Examinations 2012/2013

SECOND YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN AGRICULTURE

BIO 0210: AGRICULTURAL BIOCHEMISTRY

DATE: APRIL 2013

TIME: 1½ HOURS

INSTRUCTIONS: Answer questions *one* and any other *two* questions

QUESTION ONE – (30 MARKS)

- a. Define the following terms: (4 Marks)
- Conjugated proteins
 - Biomembranes
 - Carbohydrates
 - Agricultural biochemistry
- b. Distinguish between the following:
- Integral membrane proteins and peripheral membrane proteins. (4 Marks)
 - Structural and storage polysaccharides (4 Marks)
 - Fat soluble and water soluble vitamins. (4 Marks)
- c. Monosaccharides are the basic building blocks of carbohydrates. Discuss their derivatives. (6 Marks)
- d. What are the properties of water? (5 Marks)
- e. Giving examples, highlight the sources of Vitamin A. (3 Marks)

QUESTION TWO – 15 MARKS

Discuss the classification and functions of lipids.

QUESTION THREE – 15 MARKS

Carbohydrates are the most abundant molecules on earth. Discuss

QUESTION FOUR – 15 MARKS

By use of relevant examples, discuss the structure and functions of proteins.

QUESTION FIVE – 15 MARKS

- a. State the various components of cells. (3 Marks)
- b. Differentiate between prokaryotic and eukaryotic cells. (7 Marks)
- c. Discuss the carbon containing molecules of a cell. (5 Marks)